

Date: Tuesday, 3/18/2008 3:58:50 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : ROUND BILLET, ALUMINUM
Job Number : 38101	
Estimate Number : 12286	
P.O. Number :	Part Number : D6103003
This Issue : 3/18/2008 S.O. No. :	Drawing Number : D6103 REV B
Prsht Rev. : NC	Project Number : N/A
First Issue : 1 / Type : PURCHASED PARTS	Drawing Revision : B
Previous Run : 36236	Material :
Written By :	Due Date : 3/31/2008 Qty: 24 Um: Each
Checked & Approved By : <u>080318</u>	
Comment : Est Rev: A New Issue 06-02-09 JLM	

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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Comment: PURCHASING

Issue P/O: 599308/03/26

a) Description: Aluminum round billet

b) Ø3.500" x 12.500" long

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Material: 7075-T7351 (QQ-A-225/9)

Material certification required

(24)

2.0	D6103003P	round alum billet
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 24.0000 Each(s)  
 alum billet

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect For Transit Damage

Ensure material certification is attached

08/4/8 (24)

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

08/04/14

(24)

5.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

08/04/14

(24)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: ROUND BILLET,,ALUMINUM

Job Number: 38101

Part Number: D6103003

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



08/04/15

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-04-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

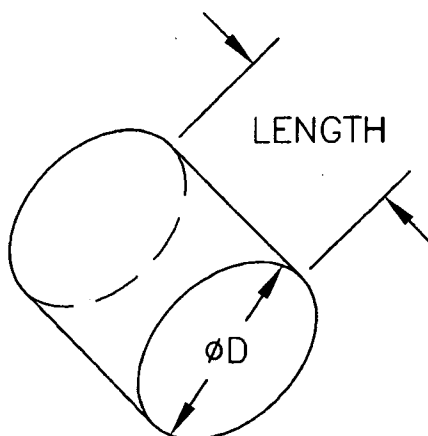
NOTE: Date & initial all entries



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED HHC	APPROVED HHC	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

## SPECIFICATION CONTROL DRAWING

RELEASED  
06.02.07



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY  
DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 38101

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

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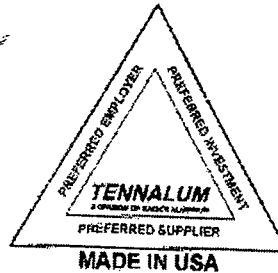
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# KAISER

## ALUMINUM

### FABRICATED PRODUCTS

Tennalium  
PO Box 669  
Jackson, TN 38302  
731-423-2811



Revised Certification  
**CERTIFIED TEST REPORT**  
<http://KaiserEngProd.com>

CUSTOMER PO NUMBER: 01-46669		CUSTOMER PART NUMBER: 8808		PRODUCT DESCRIPTION: Cold Finished Round	
KAISER ORDER NUMBER: 640503	LINE ITEM: 1	SHIP DATE: 03/06/2008	ALLOY: 7075	TEMPER: T7351	
WEIGHT SHIPPED: 1967 lbs.	QUANTITY: 14 pcs.	B/L NUMBER: 27535	DIAM/DAF/THKNS: 3.500 in.	WIDTH: 0.000 in.	LENGTH: 144.0 in.
SHIP TO: A M Castle & Co 3400 No. Wolf Road Franklin Park, IL 60131 USA			SOLD TO: A M Castle & Co 3400 No. Wolf Road Franklin Park, IL 60131 USA		

Test Code: 1000 AC

### Actual Physical Properties

Lot Number	LONG. UTS ksi	LONG. YTS ksi	LONG. ELONG. %	COND % IACS
20103906	72.0	60.4	14.0	39.1

### Chemical Composition, WT. % (Aluminum Remainder)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS EACH	OTHERS TOTAL	Lot
Actual	0.12	0.27	1.4	0.07	2.7	0.20	5.8	0.02			20103906
Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	
Min			1.2		2.1	0.18	5.1				

### Specifications

Standard: ISO 9001, ASTM B211-03, AMS 4124D, AMS-QQ-A-225/9 Non-Standard: A97075-11-9

**CASTLE METALS CORP.**  
DATE RCVD 3/10/08  
IAC 8808  
APPROVED BY [Signature]

### CERTIFICATION

Kaiser Aluminum & Chemical Corporation ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

*John Rennekamp*

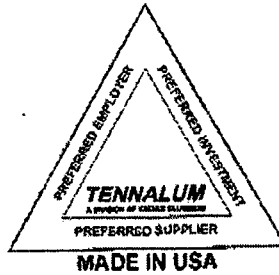
Plant Serial: 102879

Kaiser Order Number: 640503

Line Item: 1

**KAISER  
ALUMINUM  
FABRICATED PRODUCTS**

Tennalum  
PO Box 669  
Jackson, TN 38302  
731-423-2811



Revised Certification  
**CERTIFIED TEST REPORT**  
<http://KaiserEngProd.com>

**Miscellaneous Notes**

Made in USA

This material was melted and manufactured in the USA. Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. AS9100B:2004 This material meets the requirements of (cold finished) T73 temper and QQ-A-225/9E (CANCELLED). NAFTA - YES.

**CERTIFICATION**

Kaiser Aluminum & Chemical Corporation ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

Plant Serial: 102679

Kaiser Order Number: 640503

Line Item: 1